

Estimated loss to the planters between \$250,000 and \$300,000; I mean by this, loss of stock, negro cabins, corn cribs, and growing corn, which had to be replanted. Land was badly washed and fertilizer destroyed. Nearly every negro cabin was washed away, and two planters lost about 700 bushels of corn each. All the planters having creeks on their places emptying into the rivers were as badly damaged as the river planters, as the creeks overflowed their banks and covered the bottom lands, all of which had been planted. This flood will throw the river planters behind about one month."

The flood wave, being fed by overflowed creeks and small streams, moved slowly southward, carrying with it any obstructions which happened to be in the path, most bridges being carried away by the pressure of the timber coming down in the torrent, and lowlands became inundated, menacing the lives and property of residents, and the timber interests situated thereon. Most of the damage reported was destruction of planted crops, of which vast quantities were destroyed, or badly injured by water. No reports of serious loss to the timber and sawmill interests have been received. The representatives of these interests kept in daily communication with this office, and any probable loss was averted by the warnings.

In many instances the railroad track and ties were washed away, the breaks on the Mobile and Ohio Railroad were many, interrupting transportation, and no trains were run over this road between Meridian, Miss., and Mobile, Ala., for about a week or ten days. Telegraphic communication was interrupted, owing to washing away of bridges, etc. Repairs to railroad and telegraph property are still in progress. Several spans (wooden) of the Louisville and Nashville Railroad Bridge at Pascagoula, Miss., were washed away, as a result of a timber gorge.

It is estimated the damage done by the flood in this district will probably reach one million and a half dollars, and that the amount of property saved from destruction by the warnings of the Bureau, will aggregate a quarter of a million dollars.

The rivers were falling rapidly at the close of the month, and were below the danger line, save at Demopolis and points below on the Lower Tombigbee River.

In southern Mississippi, where the land is quite level, the

enormous rains of the second decade of the month, caused general disaster to everything that could possibly be affected. In many places the rainfall was vastly greater than had ever before been known, and all streams were higher by several feet than the greatest previous record. The Pearl and Black rivers were especially high. Several lives were lost; many entire towns were flooded; railroad traffic of every description was totally suspended for many days; hundreds of bridges, both railroad and highway, were carried away; thousands of heads of stock were drowned; hundreds of barns and houses destroyed, and tens of thousands of acres of lands overflowed, totally destroying the growing crops. It is impossible to give an accurate estimate of the amount of damage done by this flood. It was at least seven or eight millions of dollars, about equally divided between private citizens and the railroad companies.

A detailed report of the great Colorado River flood in Texas during this month has been made by Dr. I. M. Cline, official in charge of the Weather Bureau office at Galveston, Tex., and is printed in another portion of this REVIEW.

The highest and lowest water, mean stage, and monthly range at 131 river stations are given in Table XI. Hydrographs for typical points on seven principal rivers are shown on Chart V. The stations selected for charting are: Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.—*H. C. Frankenfield, Forecast Official.*

CLIMATE AND CROP SERVICE.

By JAMES BERRY, Chief of Climate and Crop Service Division.

The following extracts relating to the general weather conditions in the several States and Territories are taken from the monthly reports of the respective sections of the Climate and Crop Service. The name of the section director is given after each summary.

Rainfall is expressed in inches.

Alabama.—The mean temperature was 62.0°, or about 0.5° above normal; the highest was 91°, at Bermuda on the 24th, and the lowest, 24°, at Oneonta on the 1st. The average precipitation was 9.06, or about 5.00 above normal; the greatest monthly amount, 19.64, occurred at Eutaw, and the least, 3.27, at Rock Mills.

The precipitation was decidedly excessive from west-central to northeastern portions of the State, causing destructive floods in western counties, inundating large areas of planted lands, which had to be entirely replanted.—*F. P. Chaffee.*

Arizona.—The mean temperature was 57.7°, or 5.0° below normal; the highest was 102°, at Fort Mohave on the 18th, and the lowest, 10°, at Flagstaff on the 24th. The average precipitation was 1.37, or 0.54 above normal; the greatest monthly amount, 4.21, occurred at Flagstaff, while none fell at Cochise and Russellville.—*W. G. Burns.*

Arkansas.—The mean temperature was 62.2°, or 0.6° below normal; the highest was 96°, at Conway on the 23d, and the lowest, 24°, at Witts Spring on the 3d, and at Pond on the 12th. The average precipitation was 4.98, or 0.18 above normal; the greatest monthly amount, 10.06, occurred at Rison, and the least, 1.51, at Forrest City.—*E. B. Richards.*

California.—The mean temperature of the State, obtained by weighting the reports from 189 stations, so that equal areas have about equal weight, was 53.9°, which was 2.8° below the April normal for the State, as determined from 157 records; the highest was 102°, at Ogilby, San Diego County, on the 1st, and the lowest, 4°, at Bodie, Mono County, on the 10th. The average precipitation for the State, as determined by the records of 190 stations, was 2.14; the excess, as indicated by reports from 157 stations which have normals, was 0.25; the greatest monthly amount, 8.59, occurred at Delta, Shasta County, while none fell at Ogilby and Palm Springs.—*Alexander G. McAdie.*

Colorado.—The mean temperature was 42.3°, or 2.3° below normal; the highest was 84°, at Lamar on the 2d, and the lowest, 9° below zero, at Longs Peak. The average precipitation was 5.97, or more than double any previous record for April; the greatest monthly amount,

16.52, occurred at Lake Moraine, and the least, 0.79, at Rangely.—*F. H. Brandenburg.*

Florida.—The mean temperature was 70.0°, or normal; the highest was 93°, at Archer on the 17th, Clermont on the 12th, 13th, 23d, and 28th, Earnestville on the 11th and 17th, Eustis on the 11th, and Nocatee on the 12th; the lowest was 33°, at Deland on the 6th. The average precipitation was 4.49, or 2.10 above normal; the greatest monthly amount, 13.05, occurred at Middleburg, and the least, 0.75, at Sebastian.—*A. J. Mitchell.*

Georgia.—The mean temperature was 64.3°, or about normal; the highest was 92°, at Statesboro on the 28th, and the lowest, 23°, at Clayton and Dahlonga on the 1st. The average precipitation was 5.72, or 2.36 above normal; the greatest monthly amount, 10.50, occurred at Toccoa, and the least, 2.77, at Dublin.—*J. B. Marbury.*

Idaho.—The mean temperature was 47.5°, or 2.0° above normal; the highest was 89°, at Hagerman on the 1st, and the lowest, 20°, at Atlanta on the 3d. The average precipitation was 2.05, or 0.63 above normal; the greatest monthly amount, 4.27, occurred at American Falls, and the least, 0.53, at Challis.—*S. M. Blandford.*

Illinois.—The mean temperature was 53.5°, or nearly normal; the highest was 88°, at several stations on different dates, and the lowest, 19°, at Scales Mound on the 10th. The average precipitation was 1.53, or 1.56 below normal; the greatest monthly amount, 3.95, occurred at at Round Grove, and the least, 0.38, at Monticello.—*M. E. Blystone.*

Indiana.—The mean temperature was 52.4°, or nearly normal; the highest was 88°, at Greensburg on the 7th, at Prairie Creek on the 29th and at Fairmont on the 30th, and the lowest, 20°, at Bluffton on the 10th. The average precipitation was 1.64, or 1.62 below normal; the greatest monthly amount, 2.92, occurred at Bluffton, and the least, 0.13, at Bedford.—*C. F. R. Wappenhans.*

Iowa.—The mean temperature was 52.2°, or 2.7° above normal; the highest was 89°, at Hampton on the 27th, and at Red Oak on the 28th, and lowest, 19°, at Mt. Pleasant on the 1st. The average precipitation was 2.67, or slightly below normal; the greatest monthly amount, 6.62, occurred at Thurman, and the least, 0.43, at Batavia.—*J. R. Sage, Director; G. M. Chappel, Assistant.*

Kansas.—The mean temperature was 55.8°, or nearly normal; the highest was 88°, at Medicine Lodge on the 26th, and at Oswego on the 9th and 27th, and the lowest, 10°, at Scott on the 10th. The average precipitation was 4.12, or 1.68 above normal; the greatest monthly amount, 6.90, occurred at Olathe, and the least, 2.10, at Sedan.—*T. B. Jennings.*

Kentucky.—The mean temperature was 56.2°, or 0.8° below normal; the highest was 90°, at Alpha on the 29th, and the lowest, 15°, at Middlesboro on the 1st. The average precipitation was 2.15, or 1.52 below normal; the greatest monthly amount, 3.92, occurred at Mount Hermon, and the least, 1.04, at Catlettsburg.—*H. B. Hersey.*

Louisiana.—The mean temperature was 67.0°, or 0.7° below normal; the highest was 96°, at Libertyhill on the 26th, and the lowest, 30°, at Mansfield on the 1st and at Plain Dealing on the 12th. The average precipitation was 9.82, or 5.41 above normal; the greatest monthly amount, 17.42, occurred at Amite, and the least, 2.30, at Minden.—*W. T. Blythe.*

Maryland and Delaware.—The mean temperature was 52.5°, or 0.3° above normal; the highest was 86°, at Hancock on the 30th, and the lowest, 16°, at Sunnyside on the 5th. The average precipitation was 1.95, or 1.31 below normal; the greatest monthly amount, 3.65, occurred at Prince Fredericktown, and the least, 0.64, at Cumberland, Md.—*F. J. Walz.*

Michigan.—The mean temperature was 46.0°, or 2.3° above normal; the highest was 85°, at Sidnaw on the 28th, and the lowest, 6°, at Wetmore on the 3d. The average precipitation was 1.71, or 0.51 below normal; the greatest monthly amount, 3.15, occurred at Mackinaw City and Cheboygan, and the least amount, 0.30, occurred at Lincoln.—*C. F. Schneider.*

Minnesota.—The mean temperature was 49.5°, or 4.9° above normal; the highest was 90°, at Hallock on the 20th, and the lowest, 12°, at Koochiching on the 13th. The average precipitation was 1.47, or 1.17 below normal; the greatest monthly amount, 3.25, occurred at Luverne, and the least, 0.28, at Alexandria.—*T. S. Outram.*

Mississippi.—The mean temperature was 65.0°, or nearly normal; the highest was 93°, at Leakesville on the 25th, and the lowest, 27°, at Louisville and Ripley on the 1st. The average precipitation was 11.50, or 7.57 above normal; the greatest monthly amount, 19.15, occurred at Natchez, and the least, 4.82, at Austin.

On the 15th, 16th, and 17th the precipitation was excessive, being the heaviest on record in many places. The following 24-hourly amounts are reported: Windham, 10.80; Fayette, 9.25; Bay St. Louis, 8.77; Magnolia, 8.41; Canton, 8.25; and Port Gibson, 7.64. This storm covered the southern and middle portion of the State; streams were swollen out of their banks; bridges, fences, houses, railroads, etc., were carried away, and in Lauderdale and Hinds counties several persons were drowned, the water coming upon them too fast to admit of escape. Thousands of acres of cotton and corn were laid waste.—*H. E. Wilkinson.*

Missouri.—The mean temperature was 56.6°, or 0.8° above normal; the highest was 89°, at Wylie on the 9th, Appleton City on the 26th, and Jefferson City on the 29th, and the lowest, 21°, at Potosi, on the 5th. The average precipitation was 3.37, or 0.48 below normal; the greatest monthly amount, 6.76, occurred at Wheatland, and the least, 1.34, at Hannibal.—*A. E. Hackett.*

Montana.—The mean temperature was 47.0°, or 2.8° above normal; the highest was 88°, at Glendive on the 20th, and the lowest, 16°, at Ekalaka on the 2d. The average precipitation was 2.28, or 1.15 above normal; the greatest monthly amount, 12.27, occurred at Bigtimber, and the least, 0.77, at Ovando.—*E. J. Glass.*

Nebraska.—The mean temperature was 51.5°, or 2.1° above normal; the highest was 87°, at Franklin on the 23d, and the lowest, 17°, at Kimball on the 10th. The average precipitation was 4.68, or 2.10 above normal; the greatest monthly amount, 9.44, occurred at Fairfield, and the least, 0.95, at Merriman.—*G. A. Loveland.*

Nevada.—The mean temperature was 43.8°, or about 3.3° below normal; the highest was 82°, at Humboldt and Sodaville on the 18th, and the lowest, 10°, at Fenelon on the 8th and at Palmetto on the 10th. The average precipitation was 1.98, or about 1.16 above normal; the greatest monthly amount, 4.52, occurred at Ely, and the least, trace, at Mill City.—*J. H. Smith.*

New England.—The mean temperature was 44.5°, or 1.2° below normal; the highest was 83°, at North Bridgton, Me., and Westboro, Mass., on the 30th, and the lowest, 8°, at Berlin Mills, N. H., on the 5th. The average precipitation was 1.82, or 1.19 below normal; the greatest monthly amount, 4.64, occurred at Vineyard Haven, Mass., and the least, 0.35, at Flagstaff, Me.—*J. W. Smith.*

New Jersey.—The mean temperature was 50.8°, or 1.7° above normal; the highest was 82°, at Paterson on the 30th, and the lowest, 17°, at Toms River on the 11th. The average precipitation was 2.29, or 1.13 below normal; the greatest monthly amount, 3.03, occurred at Plainfield, and the least, 1.59, at Trenton.—*E. W. McGann.*

New Mexico.—The mean temperature was 49.1°, or 3.9° below normal; the highest was 86°, at Horse Springs on the 1st, and the lowest, 2°, at Winsors on the 12th. The average precipitation was 1.41, or 0.86 above normal; the greatest monthly amount, 7.19, occurred at Folsom, while at Cambray, Deming, and Engle none was recorded.—*R. M. Hardinge.*

New York.—The mean temperature was 45.2°, or 1.2° above normal; the highest was 83°, at Schenectady on the 30th, and the lowest, 9°, at Moria on the 14th. The average precipitation was 1.43, or 1.02 below normal; the greatest monthly amount, 3.26, occurred at Mohonk Lake, and the least, 0.27, at Ticonderoga.—*R. G. Allen.*

North Carolina.—The mean temperature was 58.0°, or nearly normal;

the highest was 90°, at Southern Pines on the 23d, and the lowest, 15°, at Highlands on the 1st. The average precipitation was 4.74, or 0.97 above normal; the greatest monthly amount, 10.20, occurred at Highlands, and the least, 1.85, at Wilmington.—*C. F. von Herrmann.*

North Dakota.—The mean temperature was 49.3°, or 8.3° above normal; the highest was 93°, at Minto on the 20th, and the lowest, 11°, at St. John on the 15th. The average precipitation was 0.90, or 1.78 below normal; the greatest monthly amount, 2.28, occurred at Forman, and the least, trace, at Minnewaukan, Portal, and Willow City.—*B. H. Bronson.*

Ohio.—The mean temperature was 50.1°, or nearly normal; the highest was 87°, at Portsmouth on the 29th, and the lowest, 15°, at Hillhouse on the 9th. The average precipitation was 1.89, or 1.01 below normal; the greatest monthly amount, 4.04, occurred at Wauseon, and the least, 0.32, at Hanging Rock.—*J. Warren Smith.*

Oklahoma and Indian Territory.—The mean temperature was 61.3°, or nearly normal; the highest was 92°, at Jefferson and Prudence on the 3d, and the lowest, 25°, at Beaver on the 11th. The average precipitation was 4.44, or 1.46 above normal; the greatest monthly amount, 9.55, occurred at Healdton, and the least, 1.72, at Hartshorne.—*C. M. Strong.*

Oregon.—The mean temperature was 50.1°, or 1.5° above normal; the highest was 89°, at Aurora on the 29th, and the lowest, 10°, at Silverlake on the 8th. The average precipitation was 2.19, or 1.02 below normal; the greatest monthly amount, 7.8°, occurred at Glenora, and the least, 0.10, at Siskiyou.—*E. A. Beals.*

Pennsylvania.—The mean temperature was 49.2°, or 1.3° above normal; the highest was 90°, at Derry Station on the 30th, and the lowest, 13°, at Saegertown on the 10th. The average precipitation was 1.57, or 1.57 below normal; the greatest monthly amount, 2.80, occurred at Somerset, and the least, 0.60, at Franklin.—*T. F. Townsend.*

South Carolina.—The mean temperature was 62.4°, nearly normal; the highest was 90°, at Gillisonville on the 29th, and the lowest, 24°, at Clemson College, Greenville, and Holland on the 1st. The average precipitation was 5.41, or 2.38 above normal; the greatest monthly amount, 10.32, occurred at Shaws Fork, and the least, 2.35, at Georgetown.—*J. W. Bauer.*

South Dakota.—The mean temperature was 51.3°, or about 5.0° above normal; the highest was 92°, at Ashcroft and Cherry Creek on the 20th, and the lowest, 15°, at Cherry Creek on the 13th. The average precipitation was 2.73, or about 0.32 above normal; the greatest monthly amount, 4.81, occurred at Armour, and the least, 0.83, at Milbank.—*S. W. Glenn.*

Tennessee.—The mean temperature was 58.9°, or nearly normal; the highest was 90°, at Madison on the 7th and at Savannah on the 17th, and the lowest, 14°, at Erasmus on the 1st. The average precipitation was 4.48, or nearly normal; the greatest monthly amount, 10.62, occurred at Yukon, and the least, 1.14, at Elizabethton.—*H. C. Bate.*

Texas.—The mean temperature, determined by comparison of 41 stations distributed throughout the State, was 2.5° below normal. There was a general deficiency in all localities ranging from 1° to 6°, with the greatest in the vicinity of Camp Eagle Pass. The highest was 99°, at Fort Ringgold on the 25th, and the lowest, 22°, at Amarillo on the 10th. The average precipitation, determined by comparison of 50 stations distributed throughout the State, was 3.87 above the normal. There was a slight deficiency over the extreme western portion of the State and in the vicinity of Arthur City, Paris, and Sulphur Springs, while there was a marked excess elsewhere, ranging from 1.00 to 10.73, with the greatest in the vicinity of Colorado City. The rainfall was very heavy over central and southwest Texas. The greatest monthly amount, 12.36, occurred at Boerne, while none fell at Valentine.—*I. M. Cline.*

Utah.—The mean temperature was 45.7°, or 1.7° below normal; the highest was 88°, at St. George on the 19th, and the lowest, 10°, at Grover on the 9th. The average precipitation was 2.46, or 1.51 above normal; the greatest monthly amount, 4.83, occurred at Tropic, and the least, 0.49, at Soldier Summit. The precipitation was the heaviest that has occurred during April for many years.—*L. H. Murdoch.*

Virginia.—The mean temperature was 54.7°, or normal; the highest was 90°, at Fontella on the 30th, and the lowest, 12°, at Hot Springs on the 4th. The average precipitation was 2.88, or 0.11 above normal; the greatest monthly amount, 6.07, occurred at Scottsburg, and the least, 0.97, at Meadowdale.—*E. A. Evans.*

Washington.—The mean temperature was 50.8°, or about 3.0° above normal; the highest was 92°, at Ellensburg on the 30th, and the lowest, 20°, at Cle Elum on the 9th. The average precipitation was 2.06, or about 1.25 below normal; the greatest monthly amount, 6.82, occurred at Clearwater, and the least, trace, at Loomis.—*G. N. Salisbury.*

West Virginia.—The mean temperature was 51.8°, or nearly normal; the highest was 88°, at Point Pleasant on the 26th and at Huntington on the 29th, and the lowest, 16°, at Dayton on the 10th. The average precipitation was 1.35, or 1.60 below normal; the greatest monthly amount, 2.08, occurred at Wellsburg, and the least, 0.43, at Beckley.—*E. C. Vose.*

Wisconsin.—The mean temperature was 48.0°, or 3.1° above normal; the highest was 88°, at Antigo on the 28th, and the lowest, 11°, at Bayfield on the 3d. The average precipitation was 2.54, or 0.25 below

normal; the greatest monthly amount, 4.30, occurred at Koepenick, and the least, 0.83, at Racine.—*W. M. Wilson.*

Wyoming.—The mean temperature was 43.2°, or 1.7° above normal; the highest was 85°, at Douglas on the 20th and at Bittercreek on the 26th, and the lowest, 10° below zero, at Laramie on the 11th. The

average precipitation was 4.46, or nearly three times the April normal; the greatest monthly amount, 9.50 (snow, 95.0), occurred at Sherman, and the least, 1.06, at Basin. The following excessive amounts were reported: Centennial, 8.63; Cheyenne, 7.66; Fort Laramie, 7.48; Embar, 7.36; Four Bear, 6.27; Lander, 7.19.—*W. S. Palmer.*

SPECIAL CONTRIBUTIONS.

SPECIAL REPORT ON THE FLOODS IN THE COLORADO VALLEY, TEXAS, APRIL 7 TO 17, 1900, AND OTHER FLOODS DURING THE SAME PERIOD.

By I. M. CLINE, Local Forecast Official and Section Director, dated May 15, 1900.

The Colorado is the second river in size and length in Texas. Its source is in northwest Texas near the southeast corner of New Mexico. It traverses the State from northwest to southeast, has a very tortuous channel, and empties into the Gulf of Mexico near the center of the Texas coast. The gradient of this river is quite steep north of latitude 30° 20', the elevation at this latitude being 500 feet, while at the source of the river the altitude is nearly 3,000 feet. The channel of the Colorado River is very deep, ranging from 30 to 50 feet. There are, as with other Texas streams, first and second bottoms. The first bottoms through the northern and central portions of the drainage basin of the Colorado are narrow, frequently not more than 50 to 100 yards in width, and terminate abruptly in steep banks. These banks vary in height in different places from a few feet to several feet, and are styled the second banks; back of these are the second bottoms. In the lower Colorado Valley the first bottoms are more extensive and the distinction between these and the second bottoms is less marked. Stock raising is the principal industry throughout the more northern portion of the Colorado basin, while over the southern portion this industry is varied with extensive agricultural interests, even in the immediate vicinity of the river.

One of the most striking features of the Colorado River, in recent years, has been the dam across the stream at Austin. The length of this dam was 1,250 feet and its height 60 feet. The width of the reservoir was 1,000 feet, its depth 65 feet, and its length 30 miles. The dam was constructed of granite and cost in the neighborhood of \$1,000,000.

The floods coincident with the bursting of the Austin dam April 7, 1900, resulted from unusually general heavy rains which fell throughout the drainage basin of the Colorado River on April 5, 6, and 7. The following stations report precipitation during these three days amounting to 5.00 inches or more: Austin, 7.10; Blanco, 6.60; Boerne, 6.30; Brownwood, 5.30; Colorado, 8.80; Duval, 5.20; Ira, 6.39; Langtry, 5.00; Luling, 5.15; New Braunfels, 5.38; San Marcos, 6.48; and Turnersville, 5.90. There are a number of stations which report between 3.00 and 5.00 inches during the same period. Nearly all rains which exceeded 4.00 inches during this period occurred at elevations ranging from 500 to more than 2,000 feet, and were over that portion of the State where the gradients are steep. The meteorological conditions which existed prior to and at the time of the occurrence of these heavy rains may be summed up as follows: An area of low pressure of moderate intensity covered the southeastern Rocky Mountain slope, April 3, 4, and 5. On April 3 an area of high pressure made its appearance over the upper Mississippi and Missouri valleys; during April 4 and 5 this anticyclonic disturbance increased in intensity and moved southward to the Ohio Valley and Tennessee, causing very steep barometric gradients to the northeast of Texas. On April 6 the high pressure remained stationary over the Ohio Valley and Tennessee, but the gradients were not so steep as on the previous date; the area of low barometer had moved southward and covered western Texas with a well-defined cyclonic movement

of the atmosphere, although the barometer was not below 29.92 inches. On April 7 the barometer had fallen throughout the country and the disturbance which had remained nearly stationary over the southeastern Rocky Mountain slope and Texas for four days had moved southward into the Gulf of Mexico and was apparently central to the east of the mouth of the Rio Grande River.

While the conditions shown on the weather charts are such as generally give precipitation in Texas it is difficult to account for such heavy rains as occurred over a great portion of the State from April 5 to 7, inclusive. The topography of the territory covered by the rain area taken in conjunction with the wind direction, as shown by the weather charts on these dates, may be considered an important factor in producing these rains. It is observed that there was a conflict between the cool northerly and warm southerly winds over the eastern portion of the low pressure area which would have a tendency to form rapidly ascending air currents, a condition to which it appears that we must look for the cause of such phenomena.

The following table gives the rainfall in Texas during the flood period, from April 5 to 17, inclusive.

Station.	Rainfall.	Station.	Rainfall.	Station.	Rainfall.
	<i>Ins.</i>		<i>Ins.</i>		<i>Ins.</i>
Abilene.....	2.05	El Paso.....	T.	Longview.....	0.35
Alpine.....	0.03	Emory.....	0.64	Luling.....	5.15
Alvin.....	1.42	Estelle.....	2.90	Mann.....	4.23
Alice.....	1.00	Fort Clark.....	3.45	Menardville.....	2.00
Amarillo.....	3.11	Fort McIntosh.....	2.10	Mount Blanco.....	4.05
Anna.....	1.34	Fort Ringold.....	0.00	New Braunfels.....	5.38
Anson.....	2.10	Fort Stockton.....	1.18	Palestine.....	2.00
Arthur City.....	0.20	Fort Worth.....	3.50	Panther.....	3.96
Austin.....	7.10	Forestburg.....	1.56	Paris.....	0.00
Ballinger.....	1.12	Gainesville.....	2.50	Point Isabel.....	1.00
Beaumont.....	0.00	Galveston.....	1.13	Rhineland.....	1.68
Beeville.....	2.10	Georgetown.....	4.00	Rockisland.....	3.21
Bigspring.....	2.91	Grapevine.....	2.98	Runge.....	3.70
Blanco.....	6.60	Greenville.....	0.52	Sabine.....	2.30
Boerne.....	6.30	Hale Center.....	3.25	Saginaw.....	3.70
Bowie.....	2.19	Hallettsville.....	1.80	San Antonio.....	4.28
Brazoria.....	1.86	Haskell.....	1.63	San Marcos.....	6.48
Brownham.....	1.58	Henrietta.....	1.48	Santa G. Ranch.....	0.26
Brighton.....	1.44	Hewitt.....	3.40	Sherman.....	0.00
Brownwood.....	5.30	Hondo.....	4.75	Sugarland.....	1.50
Burnet.....	4.08	Houston.....	2.00	Sulphur Springs.....	0.38
Camp Eagle Pass.....	4.00	Hulen.....	1.04	Temple.....	2.67
Coleman.....	8.10	Huntsville.....	0.80	Texarkana.....	0.32
Colorado.....	8.80	Ira.....	6.39	Tulia.....	4.50
Columbia.....	0.70	Jacksonville.....	0.49	Turnersville.....	5.90
Corpus Christi.....	1.26	Jasper.....	0.70	Tyler.....	0.40
Corsicana.....	2.64	Kent.....	0.00	Victoria.....	1.48
Cuero.....	2.49	Kerrville.....	5.93	Waco.....	3.27
Dallas.....	2.30	Lampasas.....	4.58	Waxahachie.....	3.00
Danevang.....	1.48	Langtry.....	5.00	Weatherford.....	2.95
Dublin.....	4.38	Llano.....	4.65	Wichita Falls.....	0.06
Duval.....	5.20				

From a study of the rainfall by dates there appears to have been two rain areas. On April 5 heavy rains occurred over the southwestern portion of the panhandle. On the same date another area of heavy rainfall appeared along the Lower Rio Grande in the counties of Val Verde, Kinney, and Maverick, more than 300 miles south of the rain area in the panhandle. On April 6 the rain area from the panhandle moved toward the southeast, giving very heavy rains over the upper drainage basins of the Colorado and Brazos rivers. There was apparently a veritable cloudburst in Irion County judging from the local floods and the overflows which followed in the bottoms of the South Concho River. The rain area from